IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with <u>underlining</u> and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Currently Amended) An organism characteristic data acquiring apparatus for acquiring organism characteristic data, for at least one of registration organism characteristic data storage and an authentication unit for authenticating the identification object person, from ~~each of~~ an identification object person ~~and/or~~ <u>or</u> a registration object person to authenticate the identification object person based on the organism characteristic data, comprising:

a sampling section for successively sampling partial images of a portion of an organism from each of the identification object person and/or the registration object person, each sampled partial image having an overlapping portion shared with a previously sampled partial image sampled immediately before the sampled partial image;

a detection section for detecting, substantially contemporaneously and subsequent to obtaining the sampled partial image by said sampling section, a relative positional relationship between the sampled partial image and the previously sampled partial image based on the overlapping portion;

an extraction section for extracting, substantially contemporaneously and subsequent to detection of the relative positional relationship by said detection section, characteristic portion data including characteristic information unique to the organism portion from the sampled partial image; and

a synthesis section for synthesizing, substantially contemporaneously and subsequent to extraction of the characteristic portion data by said extraction section, the characteristic portion data of the sampled partial image extracted by said extraction section and characteristic portion data of the previously sampled partial image based on the relative positional relationship of the sampled partial image detected by said detection section and outputting a result of the synthesis as organism characteristic data of the portion of the organism for the at least one of registration organism characteristic data storage and an authentication unit for authenticating the identification object person using sampled partial images forming less than an entire image of the portion of the organism sampled in said sampling.

2. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 1, wherein said sampling section samples a pattern formed from a ridge on the portion of the organism.

3. (Original) The organism characteristic data acquiring apparatus as claimed in claim 2, wherein said extraction section extracts, as the characteristic portion data, information regarding a characteristic point of the ridge.

4. (Original) The organism characteristic data acquiring apparatus as claimed in claim 3, wherein said extraction section extracts, as the information regarding a characteristic point of the ridge, at least one of a position, a type and a direction of the characteristic point.

5. (Original) The organism characteristic data acquiring apparatus as claimed in claim 3, wherein said extraction section extracts, as the characteristic portion data, a position of a sweat gland which exists on the ridge.

6. (Original) The organism characteristic data acquiring apparatus as claimed in claim 3, wherein said extraction section extracts, as the characteristic portion data, a number of sweat glands which exist between the characteristic points on the ridge.

7. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 3, wherein said extraction section extracts, as the characteristic portion data, a position of a ridge end which is at an end of the sampled partial image.

8. (Original) The organism characteristic data acquiring apparatus as claimed in claim 7, wherein said extraction section extracts, as the characteristic portion data, information of a connectional relationship between the characteristic point and the ridge end.

9. (Cancelled)

10. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2, wherein said extraction section extracts, as the ridge structure data, a skeleton line image obtained by thinning the image of the ridge.

11. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2, wherein said extraction section extracts, as the ridge structure data, a binary image obtained by binarizing the image of the ridge.

12. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2, wherein said detection section detects, as the relative positional relationship, a positional relationship of superposition between the sampled partial image and the previously sampled partial image such that ridges same as each other in the sampled partial image and the previously sampled partial image are smoothly connected to each other.

13. (Cancelled)

14. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2, wherein said detection section detects, as the relative positional relationship, a corresponding relationship of the ridges same as each other in the sampled partial image and the previously sampled partial image.

15. (Cancelled)

16. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 1,
     wherein said sampling section obtains the sampled partial image by replacing the organism portion on a sampling face by a plural number of times for sampling a partial image, and
     wherein characteristic portion data regarding one of the partial images, having an area which has a side shared by or overlapping at least one other of the partial images sampled by said sampling section, is used as an object of the synthesizing process by said synthesis section.

17. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2,
     wherein said sampling section obtains the sampled partial image by replacing the organism portion on a sampling face by a plural number of times for sampling a partial image, and

wherein characteristic portion data regarding one of the partial images, having an area which has a side shared by or overlapping at least one other of the partial images sampled by said sampling section is used as an object of the synthesizing process by said synthesis section.

18. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 1,

wherein said sampling section obtains the sampled partial image while the organism portion is relatively moved with respect to a sampling face for sampling a partial image, and

wherein characteristic portion data regarding one of the partial images, having an area which has a side shared by or overlapping at least one other of the partial images sampled by said sampling section is used as an object of the synthesizing process by said synthesis section.

19. (Previously Presented) The organism characteristic data acquiring apparatus as claimed in claim 2,

wherein said sampling section obtains the sampled partial image while the organism portion is relatively moved with respect to a sampling face for sampling a partial image, and

wherein characteristic portion data regarding one of the partial images, having an area which has a side shared by or overlapping at least one other of the partial images sampled by said sampling section is used as an object of the synthesizing process by said synthesis section.

20. (Previously Presented) An authentication apparatus for authenticating an object person of authentication based on the organism characteristic data, comprising:

a sampling section for successively sampling partial images of a portion of an organism of the object person of authentication, each sampled partial image having an overlapping portion shared with a previously sampled partial image sampled immediately before the sampled partial image;

a detection section for detecting, substantially contemporaneously and subsequent to obtaining the sampled partial image by said sampling section, a relative positional relationship between the sampled partial image and the previously sampled partial image based on the overlapping portion;

an extraction section for extracting, substantially contemporaneously and subsequent to detection of the relative positional relationship by said detection section, characteristic portion data including characteristic information unique to the organism portion from the sampled partial image;

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a synthesis section for synthesizing, substantially contemporaneously and subsequent to extraction of the characteristic portion data by said extraction section, the characteristic portion data of the sampled partial image extracted by said extraction section and characteristic portion data of the previously sampled partial image based on the relative positional relationship of the sampled partial image detected by said detection section and outputting a result of the synthesis as organism characteristic data of the portion of the organism; and

a collation section for executing a collation process using the organism characteristic data from said synthesis section in order to perform personal identification of the object person of authentication using sampled partial images forming less than an entire image of the portion of the organism sampled by said sampling section, and outputting a result of the collation process as an authentication result.

21. (Previously Presented) An authentication apparatus for authenticating an object person of authentication based on the organism characteristic data, comprising:

a sampling section for successively sampling partial images of a pattern formed from a ridge on a portion of an organism of the object person of authentication, each sampled partial image having an overlapping portion shared with a previously sampled partial image sampled immediately before the sampled partial image;

a detection section for detecting, substantially contemporaneously and subsequent to obtaining the sampled partial image by said sampling section, a relative positional relationship between the sampled partial image and the previously sampled partial image based on the overlapping portion;

a ridge structure data extraction section for extracting, substantially contemporaneously and subsequent to detection of the relative positional relationship by said detection section, ridge structure data including characteristic information unique to the organism portion from the sampled partial image;

a synthesis section for synthesizing, substantially contemporaneously and subsequent to extraction of the ridge structure data by said ridge structure data extraction section, the ridge structure data of the sampled partial image extracted by said ridge structure data extraction section and ridge structure data of the previously sampled partial image based on the relative positional relationship of the sampled partial image detected by said detection section and outputting a result of the synthesis;

a characteristic data extraction section for extracting characteristic data unique to the organism portion from the result of the synthesis outputted from said synthesis section; and

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a collation section for executing a collation process using the characteristic data extracted by said characteristic data extraction section in order to perform personal identification of the object person of authentication using sampled partial images forming less than an entire image of the portion of the organism sampled by said sampling section, and outputting a result of the collation process as an authentication result.

22. (Currently Amended) An organism characteristic data acquiring method_performed by a processor, for acquiring organism characteristic data from ~~each of~~ an identification object person ~~and/or~~ or a registration object person to authenticate the identification object person based on the organism characteristic data, the method comprising:

sampling successive partial images of a portion of an organism of each of the identification object person and/or the registration object person, each sampled partial image having an overlapping portion shared with a previously sampled partial image sampled immediately before the sampled partial image;

detecting, substantially contemporaneously and subsequent to obtaining the sampled partial image by said sampling, a relative positional relationship between the sampled partial image and the previously sampled partial image based on the overlapping portion;

extracting, substantially contemporaneously and subsequent to detection of the relative positional relationship by said detecting, characteristic portion data including characteristic information unique to the organism portion from the sampled partial image; and

synthesizing, substantially contemporaneously and subsequent to extraction of the characteristic portion data by said extracting, the characteristic portion data of the sampled partial image extracted by said extracting and characteristic portion data of the previously sampled partial image based on the relative positional relationship of the sampled partial image detected by said detecting and outputting a result of the synthesis as organism characteristic data of the portion of the organism for authentication using sampled partial images forming less than an entire image of the portion of the organism sampled in said sampling.

23. (Currently Amended) The organism characteristic data acquiring method performed by a processor according to claim 22, wherein a pattern formed from a ridge on the portion of the organism is sampled by said sampling.

24. - 25. (Cancelled)

26. (Currently Amended) A computer-readable recording medium on which an organism characteristic data acquiring program for acquiring organism characteristic data, for at least one of registration organism characteristic data storage and an authentication unit for authenticating the identification object person, from ~~each of~~ an identification object person ~~and/or~~ or a registration object person to authenticate the identification object person based on the organism characteristic data is recorded, said program causing a computer to function as:

a detection section for detecting successive partial images, substantially contemporaneously and subsequent to obtaining a respective previously sampled partial image, sampled by a sampling section for sampling a partial image of a portion of an organism from each of the identification object person and/or the registration object person, each sampled partial image having an overlapping portion shared with the respective previously sampled partial image sampled immediately before the sampled partial image, a relative positional relationship between the sampled partial image and the previously sampled partial image based on the overlapping portion;

an extraction section for extracting, substantially contemporaneously and subsequent to detection of the relative positional relationship by said detection section, characteristic portion data including characteristic information unique to the organism portion from the sampled partial image; and

a synthesis section for synthesizing, substantially contemporaneously and subsequent to extraction of the characteristic portion data by said extraction section, the characteristic portion data of the sampled partial image extracted by said extraction section and characteristic portion data of the previously sampled partial image based on the relative positional relationship of the sampled partial image detected by said detection section and outputting a result of the synthesis as organism characteristic data of the portion of the organism for the at least one of registration organism characteristic data storage and an authentication unit for authenticating the identification object person using sampled partial images forming less than an entire image of the portion of the organism sampled by said detection section.

27. (Previously Presented) The computer-readable recording medium according to claim 26, wherein when said program causes the computer to function as the sampling section, said program causes the computer to sample a pattern formed from a ridge on the portion of the organism.